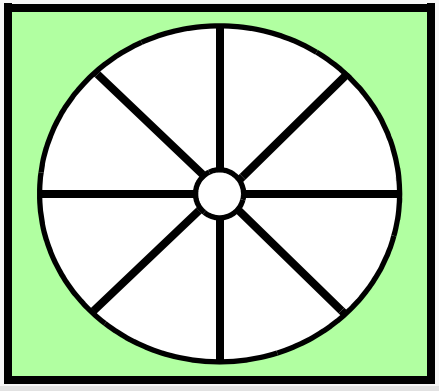
MicroMMAC-E



Supports Management Module SM-CSI1022

APRISMA SPECTRUM® POWERED SOLUTIONS

Device Management

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Introduction

This section describes the SPECTRUM Management Module for the MicroMMAC-E.

In this section, you are provided with the model type names assigned to the MicroMMAC-E in SPECTRUM.

MicroMMAC-E Management Module

The SPECTRUM MicroMMAC-E Management Module contains information necessary to manage MicroMMAC-Es, by using SPECTRUM's software emulation of the device attributes and functionality.

The MicroMMAC-E Management Module manages all MicroMMAC-E device models using the SNMP advanced network management agent and the Management Information Bases (MIBs), which come as part of the management module. The SPECTRUM model type name for the device is as follows:

BRtrCSIuMMAC: A Cabletron Systems Micro Multi Media Access Center (uMMAC) Multi-Port Intelligent Bridging Routing Module.

The MicroMMAC-E is a multi-port intelligent repeater that can be stacked with the HubSTACK series of stackable workgroup hubs. The MicroMMAC-E provides management for up to five nonintelligent stackable Ethernet hubs.

The MicroMMAC-E also supports one optional Bridging Routing Interface Module (BRIM) which bridges packets from one transmission type to another (e.g., Ethernet to: FDDI network backbones, Wide Area, or Ethernet, etc.). Other optional BRIMs are as follows:

- **BRIM-E**: Ethernet module with selectable media connections
- **BRIM-F6**: FDDI Dual Attached Station (DAS) connection
- **BRIM-WT1**: Wide Area NetworK (WAN)

When a BRIM is inserted into a MicroMMAC-E chassis, the icon dynamically changes from a hub

icon to a bridging icon, demonstrating the additional bridging functionality provided by the BRIM. This is referred to as “in-the-hub bridging/routing.”

To model these devices, you create a LAN_802_3 model representing each network the MicroMMAC-E is monitoring; you can then connect them to the device icon. This model type software “connects” a repeater icon to the repeater port and places it in the MicroMMAC-E Device Topology (DevTop) View. (The repeater model is related to the hub model with the “Manages” relation.) You copy these repeater icons into the LAN_802_3 icons to allow the hubs to gather performance statistics on each LAN_802_3 subnet.

The following sections explain how to use SPECTRUM and the management module software to monitor and manage a MicroMMAC-E.

MicroMMAC-E Applications

The MicroMMAC-E Management Module supports both common and device-specific applications described in the ***MIB II Applications***, ***Bridging Applications***, and ***Miscellaneous Applications*** documentation. SPECTRUM management of a MicroMMAC-E is based on the following common and device-specific applications:

- Bridging (CSIBridge)
  - Ethernet Special Database (SDB) (Ct_BdgEnet_App)
  - PPP_BdgApp1474
  - Spanning Tree (Ct_Stp_App)
  - Static (Static_App)
  - Transparent (CT_Tp_App
- CtRouter (CtRouterApp
  - IP Routing (CtIP2App)
  - CtIPServices
- DLM (DLM_Agent)
- CtWANAppDS1
- PPP_LCPApp1471
- CtWANAppRS232
  - RFC1317sync
- Repeating (StckRptrRev4)

- MIB--II (SNMP2_Agent)
  - ICMP (ICMP_App)
  - IP (IP2_App)
  - System (System2_App)
  - UDP (UDP2_App)
- RMON App
  - RMONEthProbe
- CtWANApp

RMON/CtRouter/DLM are also supported.

Note: If there is an Uninterruptible Power Supply (UPS) connected to your device, CtUPS_App will show as a major software application.

- Device
- Devtop
- Performance
- Configuration
- Repeater Redundancy
- Source Address
- Repeater Security Configuration
- Model Information
- Utilities

These views are further detailed in the table below and in the ***MIB II Applications***, ***Bridging Applications***, and ***Miscellaneous Applications*** documenation.

Table 1: Stack Repeater

Menu Selection	Opens the...
Performance	Performance view. See ***SPECTRUM Performance View*** documentation.
Stack Configuration	Opens the Stack Repeater Rev 4 (MicroMMac-E's Repeater). See the Section, *Configuration Views* on Page 22.
Repeater Redundancy	Repeater Configuration view. See the Section, *Configuration Views* on Page 22.
Model Information	Repeater Model Information view. See the ***SPECTRUM Views*** documentation.

Device Views

This section provides a description of the Device View for the MicroMMAC-E Management Module.

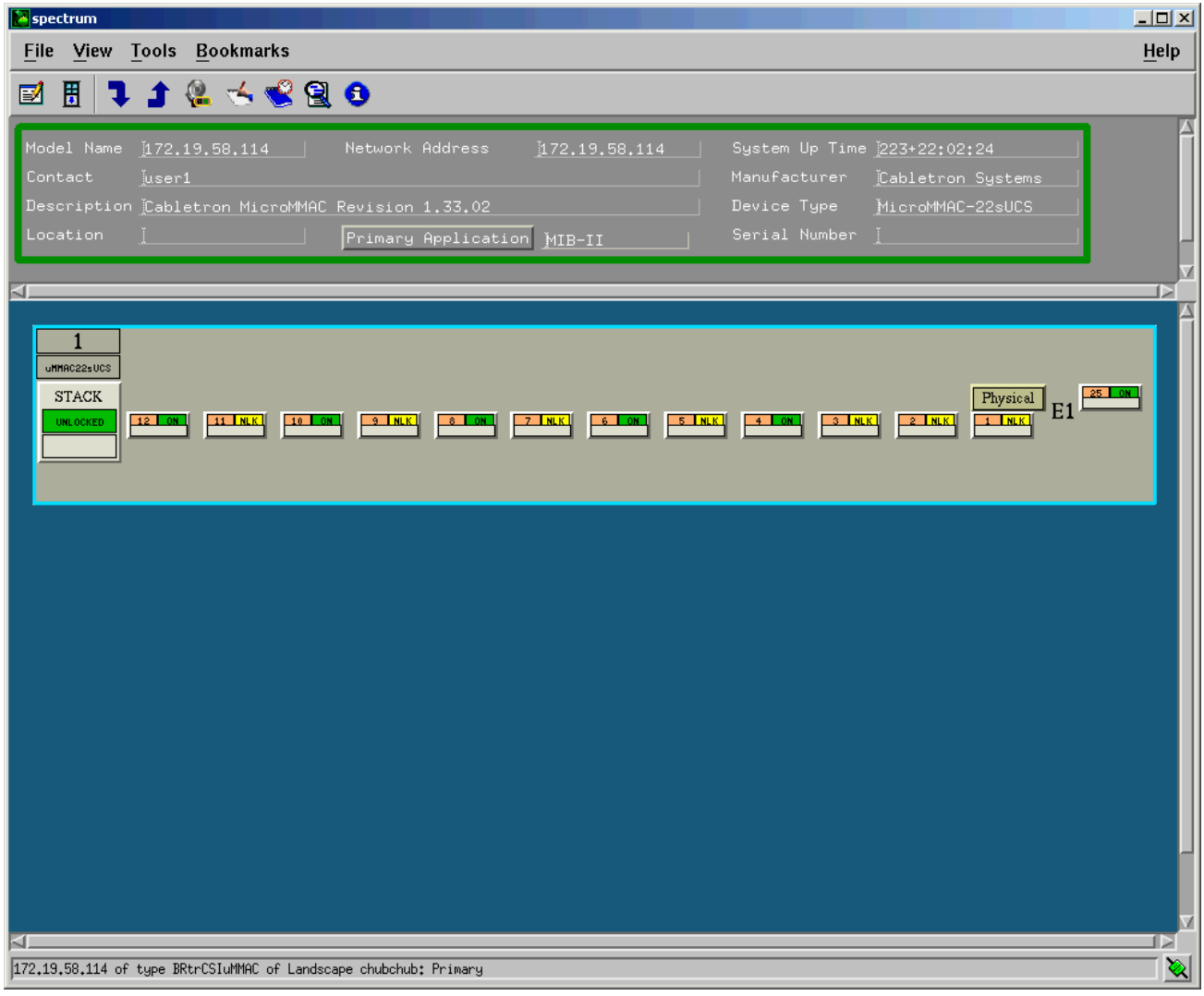
The Device view describes how to use the Interface, Chassis, and Physical representations of the MicroMMAC-E, and how to access SPECTRUM generic views and monitor performance.

- The **Chassis** View displays a logical view of the MicroMMAC-E chassis, its interfaces, and the other stacked chassis. From this view you can get information about the performance, configuration, and status of the modules; the stack (for example, repeater); the BRIM's bridge; and the ports.
- The **Interface** View displays a logical (narrative) view of the MicroMMAC-E's interfaces and provides access to information on their performance, status, and configuration.
- The **Physical** View displays a graphical representation of the device and its stack. This view gives access only to module information.

These Device views show the MicroMMAC-E's configuration. When the configuration is modified, the display reflects those changes after the model's next polling cycle.

Figure 1 shows an example of the MicroMMAC-E Device Views.

Figure 1: MicroMMAC-E Device View



Chassis Device View

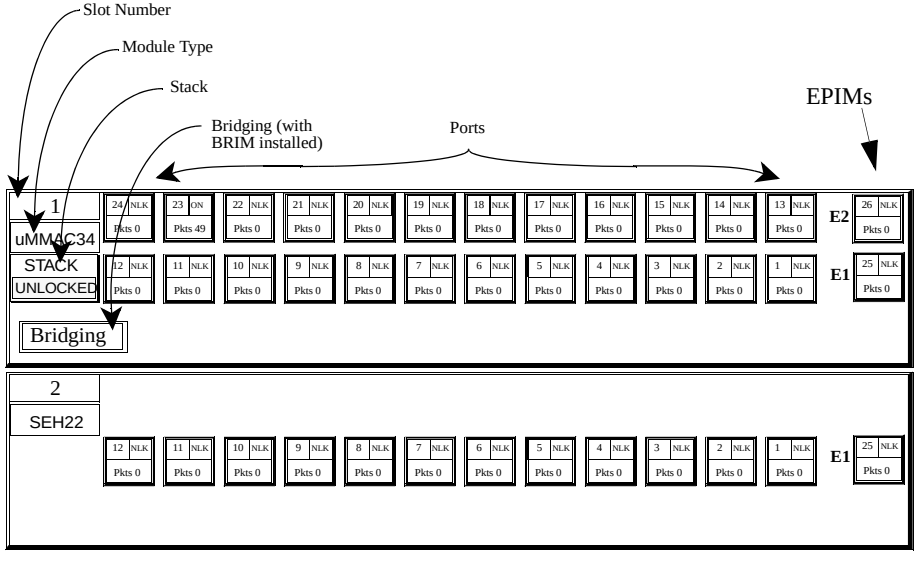
Access: *From the MicroMMAC-E device icon, select* ***Device > Chassis*** *from the* ***Icon Subviews*** *menu.*

The MicroMMAC-E Chassis Device view shows a logical representation of each module in the stack.

From this view, you can go into several fields that access information about the chassis, the module, the repeater stack, bridging, and the ports. An overview of the process for accessing the Chassis Device view follows.

Each representation of a port includes a gauge which shows changes in traffic over that port as it occurs. Figure 2 displays the fields in the MicroMMAC-E Chassis Device view (Logical Module Fields and Menu Selections).

Figure 2: Logical Module Fields and Menu Selections



The fields in the MicroMMAC-E Chassis Device view and their related menus are described below:

Slot Number

The device's assigned stack number.

Module Type

The type of module being displayed. Table 2 outlines the Icon Subviews menu selections specific to the available types of modules.

Table 2: Module Menu Selections

Menu Selection	Opens the...
uMMAC Model Information (MicroMMAC-E only)	MicroMMAC-E Model Information view. See the ***SPECTRUM Views*** documentation.
uMMAC Configuration (MicroMMAC-E only)	MicroMMAC-E Configuration view. See the ***SPECTRUM Views*** documentation.
Application View (MicroMMAC-E only)	Application view. See the ***SPECTRUM Views*** documentation.
Module Notes	Module Notes view.
Module Configuration	Module Configuration view. See the Section, *Configuration Views* on Page 22.
Module Performance	Module Performance view. See the ***SPECTRUM Views*** documentation.
Module Frame & Error Breakdown	Opens the Breakdown view. See the ***SPECTRUM Views*** documentation.
Module Frame Size	Module Frame Size & Protocols view. See the ***SPECTRUM Views*** documentation.
Module DevTop View	Module's Device Topology view. See the ***SPECTRUM Views*** documentation.
Enable All Ports	Enables all ports on the selected module.

Stack

This button provides access to views displaying information collected by the MicroMMAC-E's repeater stack. The Stack button will be in either a LOCKED, UNLOCKED, or MISMATCHED state depending on whether port security has been enabled. The stack provides the menu selections defined in Table 3.

Table 3: Stack Menu Selections

Menu Selection	Opens the...
Stack Performance	Stack Performance view. See the ***SPECTRUM Views*** documentation.
Stack Frame & Error Breakdown	Stack Frame & Size Breakdown view. See the ***SPECTRUM Views*** documentation.
Stack Frame Size & Protocols	Stack Frame Size view. See the ***SPECTRUM Views*** documentation.
Stack Configuration	Stack Configuration view. See the Section, *Configuration Views* on Page 22.
Stack Model Information	Stack Model Information view. See the ***SPECTRUM Views*** documentation.

Bridging

This button shows information views collected by the bridge, provided that a BRIM is installed in your MicroMMAC-E. Please refer to the ***How to Manage a Network with SPECTRUM*** documentation for more information on Bridges.

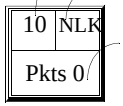
Ports

Ports are the interfaces on the module:

- The MicroMMAC-22E and -32E have twelve RJ45 ports and one EPIM (Ethernet Port Interface Modules) port.
- The MicroMMAC-24E and -34E have twenty-four RJ45 ports and two EPIM ports. EPIM ports are designated as E1 and E2.

Figure 3 shows the port icon's "at-a-glance" information:

Figure 3: Port Icon - Device Chassis View



Port Number - The number uniquely identifying the port.

Port Status - The port's status. Possible values are: ON, OFF, NLK (no link), or SEG (segmented).

Port Statistics - The rate of frames per second received by this port.

Table 4 outlines the menu selections and information you can access from the port menu:

Table 4: Port Menu Selections

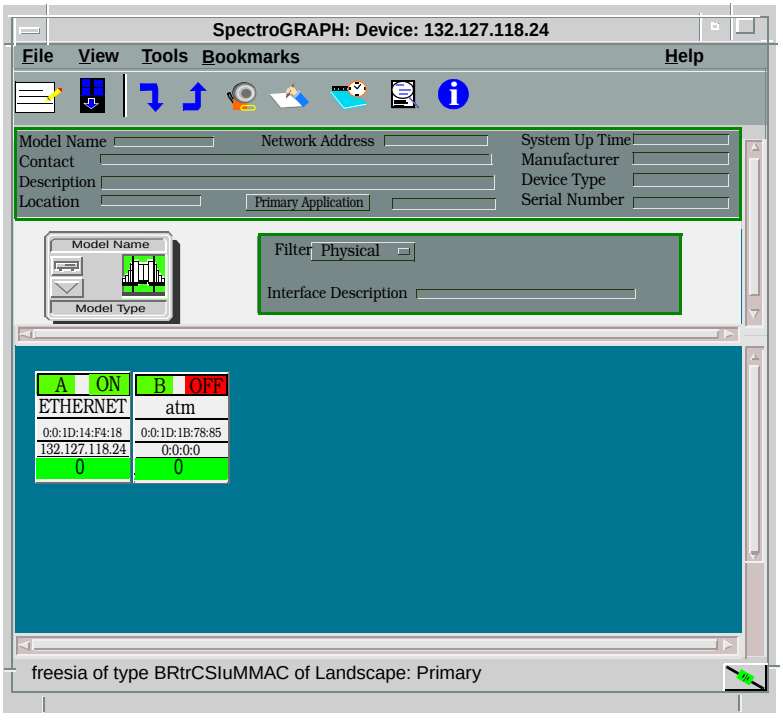
Menu Selection	Opens the...
Port Notes	Port Notes view.
Port Configuration	Port Configuration view. See the Section, *Configuration Views* on Page 22.
Port Performance	Port Performance view. See the ***SPECTRUM Views*** documentation.
Port Frame & Error Breakdown	Port Frame & Size Breakdown view. See the ***SPECTRUM Views*** documentation.
Port Frame Size & Protocols	Port Frame Size & Protocols view. See the ***SPECTRUM Views*** documentation.
Enable/Disable Port	Enables or disables the selected port.

Interface Device View

Access: *From the* ***Icon Subviews*** *menu for the FoundryIron Device icon, select* ***Device.***

This view provides dynamic configuration and performance information for each of the device's serial/network I/O ports, which are represented by Interface icons in the bottom panel of the view, as shown in Figure 4. The middle panel of the view also displays a Device icon, which allows you to monitor the device operation and access other device-specific views.

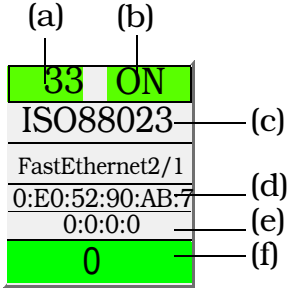
Figure 4: Interface Device View



Interface Icons

Figure 5 shows a closeup of an Interface icon from an Interface Device view. Most of the informational labels on the icon also provide double-click access to other views, as explained in the following label descriptions.

Figure 5: Interface Icon



a Interface Number Label

b Configuration - CSIIfPort View/Administrative Status Label

c *Interface Type Label*

d Physical Address Label

e IP Address Label

f Gauge Label

Interface Number Label

This label displays the interface number.

Configuration - CSIIfPort View/Administrative Status Label

This label gives you the interface's administrative status as well as access to the Configuration - CSIIfPort view. The Administrative Status label includes a text label and a background color representing the current state of the interface. You can access this view by double-clicking on the label, or by highlighting the interface icon and using the right mouse button to select **Configuration** from the **Icon Subviews** menu.

Table 5 describes the information found in the Configuration - CSIIfPort view.

Table 5: Configuration - CSIIfPort View

Field	Description
Interface Index	Indicates the value identifying the interface.
Interface Type	Indicates the type of interface.
Operation Status	Indicates the current operating condition of the interface for which the entry exists.* Possible entries are: On (Green), Off (Blue), Test (Red), and (Yellow) when operational status is off and admin status is on.
Admin Status	Indicates the current administrative state of the interface for which the entry exists.* Possible entries: On (Green), Off (Blue), Test (Red), and (Yellow) when operational status is off and admin status is on. You can modify this field.
IF Description	Displays a textual description of the interface.

Interface Type Label

This label identifies the type of interface—e.g., Ethernet, FDDI, Other, etc. Double-click this label to access the *Secondary Address Panel* (Page 17).

Table 6 lists the available Interface Types.

Table 6: Interface Types

Interface Type	Description
Other	None of the following
Reg1822	Regular 1822
HDH1822	HDLC Distant Host protocol
DDNX25	Defense Data Network X.25
rfc877X25	RFC877 X.25
Ethernet	Ethernet CSMA/CD
iso88023	ISO CSMA/CD
iso88024	ISO token bus
iso88025	ISO token ring
iso88026	ISO man
starLan	StarLAN IEEE (Institute of Electronic & Electrical Engineers) 802.3
Prot10MB	ProNET 10 Mbps
Prot80MB	ProNET 80 Mbps
HypChan	Hyperchannel
FDDI	Fiber Distributed Data Interface
LAPB	X.25 Line Access Procedure, Balanced

Table 6: Interface Types (Continued)

Interface Type	Description
SDLC	IBM Synchronous Data Link Control protocol
T1	T1 link (USA and Japan)
CEPT	T1 link (Europe)
BasicISDN	Basic Integrated Services Digital Network
PrimISDN	Proprietary Integrated Services Digital Network
PPSerial	Proprietary Point to Point Serial
PPP	Point to Point Protocol
SFTWARLPBK	Software Loopback
CLNPoverIP	Connectionless Network Protocol over IP
Enet3MB	Ethernet 3 Mbps
XNSoverIP	Xerox Network Service Protocol over IP
SLIP	Generic Serial Line IP
ULTRA	ULTRA Technologies
T-3	T3 link
SMDS	Switched Multimegabit Data Service
FrameRelay	T1 Frame relay

Physical Address Label

This label displays the physical (MAC) address of the interface. Double-click the label to open the CSI Interface Port Model Information View. The definitions for these fields are described in the ***SPECTRUM Views*** documentation.

IP Address Label

This label displays the IP address for the interface. Double-click the label to open the *Secondary Address Panel* (Page 17), which allows you to change the address and mask for this interface.

Gauge Label

This label displays whichever performance statistic has been selected in the Gauge Control panel for this device's interfaces (see the ***SPECTRUM Views*** documentation for more information). Double-click this label to open the Port Performance view.

Interface Status View

Access: *From the **Icon Subviews** menu for the Interface icon in the Interface Device view, select **IF Status**.*

This view provides information on the operational status of the interface and allows you to enable or disable the port.

Operational Status

The current state of the interface (`ON`, `OFF`, or `Testing`).

Administrative Status

This button allows you to select the desired operational state of the interface (`ON`, `OFF`, or `Testing`).

Secondary Address Panel

Access: *From the **Icon Subviews** menu for the Interface icon in the Interface Device view, select **Secondary Address Panel**.*

This panel provides a table of IP addresses and masks obtained from the Address Translation table within the device's firmware. You can change the current address displayed in the **IP Address** field by selecting an entry from the table in this panel and clicking the **Update** button

Table 7: Color and Statistical Definitions for Each Attribute

Statistic	Color	Description
% Transmitted	white	The percentage of the total number of packets that have been transmitted by this interface during uptime.
% Discarded	orange	The percentage of the total number of packets that have been discarded by this interface during uptime.
% Error	red	The percentage of the total number of packets that have contained errors by this interface during uptime.
% Host Bound	yellow	The percentage of the total number of packets that have been delivered to the local host from the interface during uptime.
# In Packet Rate p/s	light blue	The total number of packets that have been received by this interface during uptime.
# Out Packet Rate p/s	turquoise	The total number of packets that have been transmitted by this interface during uptime.

Table 7: Color and Statistical Definitions for Each Attribute (Continued)

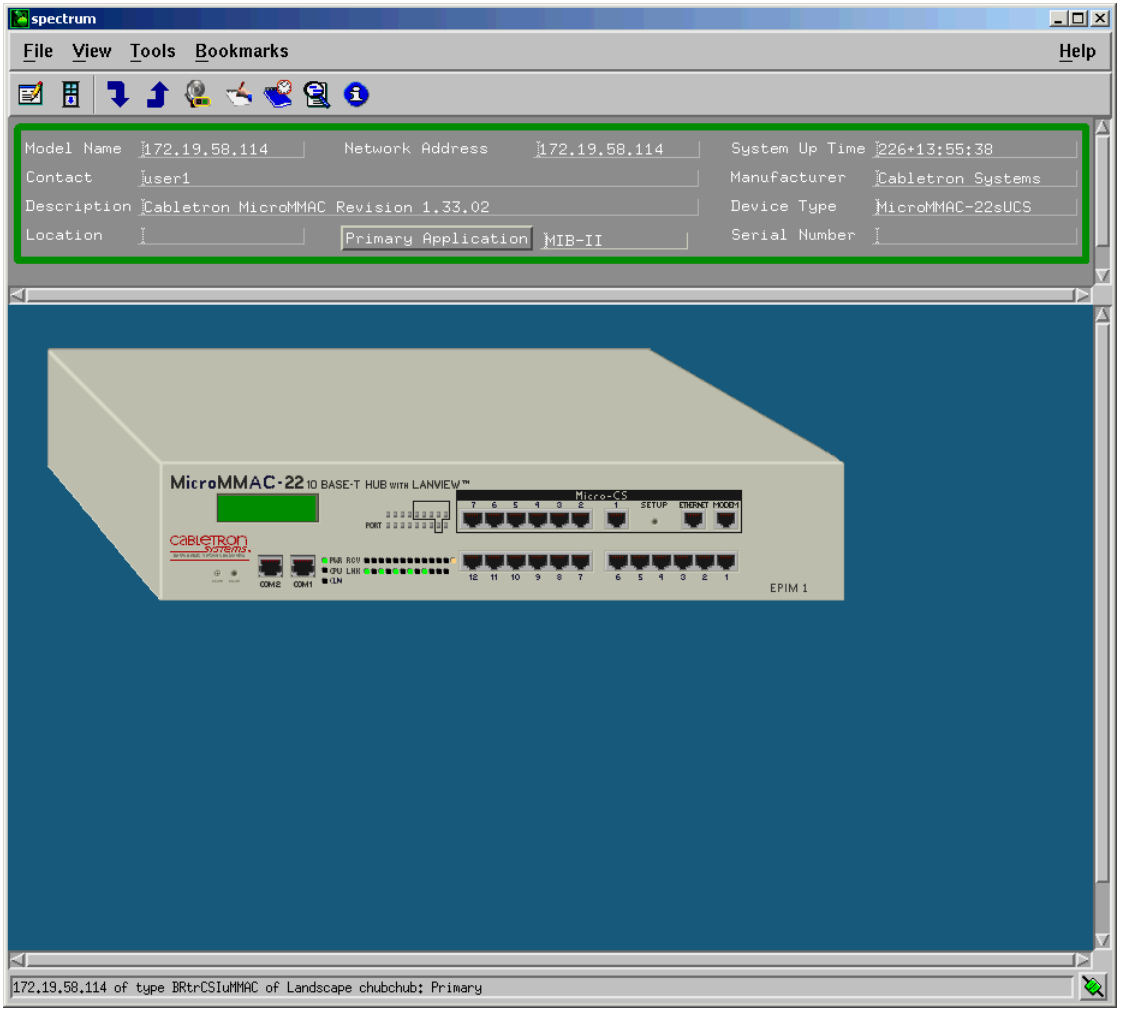
Statistic	Color	Description
# Total Packet Rate p/s	royal blue	The total number of packets that have been transmitted and received by this interface during uptime.
In Load	green	The amount of bandwidth used per packets received during the interface's uptime.
Out Load	mustard green	The amount of bandwidth used per packets transmitted during the interface's uptime.
Total Load	light green	The amount of bandwidth used per packets received and transmitted during the interface's uptime.

The Physical Device View

Access: *From the MicroMMAC-E device icon, select* ***Device > Physical*** *from the* ***Icon Subviews*** *menu.*

This section describes the module information available from the MicroMMAC-E Physical Device View, which displays a physical representation of the MicroMMAC-E module and its stack.

Figure 6: Physical Device View



Non-generic selections related to the module icons in the MicroMMAC-E Physical Device View are described in Table 8.

Table 8: Physical Device View - Module Icon Menu Selections

Menu Selection	Opens the...
uMMAC Model Information	MicroMMAC-E Model Information view. See the ***SPECTRUM Views*** reference.
uMMAC Configuration	MicroMMAC-E Configuration view. See the ***SPECTRUM Views*** documentation.
Application View	Application view. See the ***SPECTRUM Views*** documentation.
Module Notes	Module Notes view.
Module Configuration	Module Configuration view. See the Section, *Configuration Views* on Page 22.

Table 8: Physical Device View - Module Icon Menu Selections (Continued)

Menu Selection	Opens the...
Module Performance	Module Performance view. See *the* ***SPECTRUM Views*** documentation.
Module Frame & Error Breakdown	Module Frame & Size Breakdown view. See the Section, *Configuration Views* on Page 22.
Module Frame Size	Module Frame Size & Protocols view. See the ***SPECTRUM Views*** documentation.
Module DevTop View	Module's Device Topology view. See the ***SPECTRUM Views*** documentation.
Enable All Ports	Enables all ports on the selected module.

Configuration Views

This section provides general descriptions of the configuration views that are available for the MicroMMAC-E.

These views allow you to access device-specific configuration information.

The MicroMMAC-E management module manages the following configuration views:

- *Device Configuration View* on Page 22
- *Module and Port Configuration Views* on Page 24
- *Trap Configuration* on Page 25
- *Alarm Configuration* on Page 26
- *Stack Repeater Configuration View* on Page 28

Device Configuration View

Access: *From the MicroMMAC-E device icon, select* ***Configuration*** *from the* ***Icon Subviews*** *menu.*

The MicroMMAC-E Device Configuration view provides information on the configuration and operating status of the MicroMMAC-E and includes the following information:

Contact Status
This field indicates if a connection with the device has been established.

Firmware Revision
The firmware revision for the device being modeled.

Hardware Revision
The hardware revision for the device being modeled.

Interface Configuration Table

The Interface Configuration Table gives you the following configuration information for each of the MicroMMAC-E's ports:

Number of Interfaces

Displays the number of interfaces available from this device.

Index

Displays the number of the interface.

Type

The Port Type Label displays the type of MicroMMAC-E interface. Possible interface types are shown in Table 9.

Table 9: Port Interface Types

Interface Type	Description
Other	None of the following
Reg1822	Regular 1822
HDH1822	HDLC Distant Host protocol
DDNX25	Defense Data Network X.25
rfc877X25	RFC877 X.25
Ethernet	Ethernet CSMA/CD
iso88023	ISO CSMA/CD

Table 9: Port Interface Types (Continued)

Interface Type	Description
iso88024	ISO token bus
iso88025	ISO token ring
iso88026	ISO man
starLan	StarLAN IEEE (Institute of Electronic & Electrical Engineers) 802.3
Prot10MB	ProNET 10 Mbps
Prot80MB	ProNET 80 Mbps
HypChan	Hyperchannel
FDDI	Fiber Distributed Data Interface
LAPB	X.25 Line Access Procedure, Balanced
SDLC	IBM Synchronous Data Link Control protocol
T1	T1 link (USA and Japan)
CEPT	T1 link (Europe)
BasicISDN	Basic Integrated Services Digital Network
PrimISDN	Proprietary Integrated Services Digital Network
PPSerial	Proprietary Point to Point Serial
PPP	Point to Point Protocol
SFTWARLPBK	Software Loopback

Table 9: Port Interface Types (Continued)

Interface Type	Description
CLNPoverIP	Connectionless Network Protocol over IP
Enet3MB	Ethernet 3 Mbps
XNSoverIP	Xerox Network Service Protocol over IP
SLIP	Generic Serial Line IP
ULTRA	ULTRA Technologies
T-3	T3 link
SMDS	Switched Multimegabit Data Service
FrameRelay	T1 Frame relay

Phy Address
The Ethernet (MAC) address of the interface.

Max Frame Size
The maximum frame size for the MicroMMAC-E interfaces.

Oper Status
The current operational state of this port (`Up`, `Down`, or `Testing`).

Module and Port Configuration Views

The Module and Port Configuration views provide information on the configuration and operating status of selected modules or ports. You can access the Module Configuration view from the MicroMMAC-E Chassis Device view by clicking on the module to highlight it and then selecting **Module Configuration** from the Icon Subviews menu. You can access the Port Configuration view from the MicroMMAC-E Chassis Device view by clicking on the port to highlight it and then selecting **Port Configuration** from the Icon Subviews menu.

Module Management (Module Configuration View Only)

This area of the Module Configuration view provides the following port information for the selected module:

Port Count
The total number of ports on this module.

Ports On
The total number of ports currently in the `ON` state on this module.

Ports Operational
The number of operational ports on this module.

Module Ports
Setting this field to `Enable` enables all the ports on this module. Disable will disable all ports on the module. You can also enable module ports by selecting **Enable All Module Ports** from the Icon Subviews menu for the module.

Port Management (Port Configuration View Only)

This area of the Port Configuration view provides the following information for the selected port:

Port Id
The number of the module port.

Administrative Status
The desired operational state of the port (`Enable` or `Disable`). You can update this field.

Operational Status
The current operational state of the port (`Not-Operational` or `Operational`).

Segmentation Status
The current segmentation state of the port (`Not-Segmented` or `Segmented`).

Link Status
The current link state of the port (`Not-Linked`, `Linked`, or `Not-Applicable`).

Topological State
The current port topological state (`Station` or `Trunk`).

Set Topological State
The desired port topological state (`Not_Forced` or `Forced_Trunk`). You can update this field.

Trap Configuration

This area of the Module and Port Configuration view allows you to enable or disable any of the following types of traps:

Link Traps
When enabled, all packets indicating a change in link status are reported within the trap database.

Segmentation Traps
When enabled, all packets indicating a change in segmentation status are reported within the trap database.

Source Address Traps
When enabled, all packets indicating a change in source address are reported within the trap database.

Alarm Configuration

This area of the Module or Port Configuration view provides configuration and status information for generation of alarms by the selected module. The Alarm Configuration section provides the following information:

Traffic Alarms
This field displays whether traffic alarms are disabled or enabled. You can update this field.

Traffic Threshold
The threshold value within the alarm timebase which, once that number of packets is exceeded, generates a traffic alarm. You can update this field.

Traffic Alarm Condition
You can set this field to disable the module/port if the traffic alarm threshold is exceeded: an alarm for the module is generated. This is useful in preventing excessive network traffic from alarm messages transmitted by the module and aids in module troubleshooting.

Collision Alarms
This field displays whether collision alarms are disabled or enabled. You can update this field.

Collision Threshold
The threshold value within the alarm timebase which, once that number of collisions per good packet is exceeded, generates a collision alarm. You can update this field.

Collision Alarm Condition
You can set this field to disable the module/port if the collision alarm threshold is exceeded; an alarm for the module is generated. This is useful in preventing excessive network traffic from alarm messages transmitted by the module and aids in module troubleshooting.

Broadcast Alarms
This field displays whether broadcast alarms are disabled or enabled. You can update this field.

Broadcast Threshold
The threshold value within the alarm timebase which, once that number of broadcast packets is exceeded, generates a broadcast alarm. You can update this field.

Broadcast Alarm Condition
You can set this field to disable the module/port if the broadcast alarm threshold is exceeded; an alarm for the module is generated. This is useful in preventing excessive network traffic from alarm messages transmitted by the module and aids in module troubleshooting.

Error Alarms
This field displays whether error alarms are disabled or enabled. You can update this field.

Error Threshold
The threshold value within the alarm timebase which, once the percentage of errors per good packet is exceeded, generates an error alarm.

Error Alarm Condition
You can set this field to disable the module/port if the error alarm threshold is exceeded; an alarm for the module is generated. This is useful in preventing excessive network traffic from alarm messages transmitted by the module and aids in module troubleshooting.

Error Source

The Error Source area of the Module or Port Configuration view provides a series of buttons allowing you to select error types to include in the error sum. You can modify the selectable error types. The selectable error types are as follows:

CRC
The number of packets received by the module with bad Cyclical Redundancy Checks (CRC).

Runts
The number of runt packets received by the module. A runt packet is one byte less than the standard Ethernet frame of 64 bytes (not including preamble).

OOW_Colls
The number of collisions out of the standard window (51.2µs) due to a network problem.

Alignment
The number of misaligned packets detected by the module.

No_Resource
The number of times the module ran out of resources (i.e., lack of buffer space) and could not accept packets.

Giants
The number of giant packets received by the module. A giant packet exceeds 1518 bytes (not including preamble).

Stack Repeater Configuration View

The Stack Repeater Configuration view provides information on the configuration and operating status of the network the repeater is monitoring. You can access the Stack Repeater Configuration view from the StckRptrRev4 icon by selecting Stack Configuration option or from the Application view by clicking on the Repeating icon and then selecting Configuration from the Icon Subviews menu.

Repeater Management

This area of the Repeater Configuration view provides the following port information:

Port Count
The total number of ports on this LAN segment.

Ports On
The total number of ports currently in the ON state on this network.

Ports Operational
The number of operational ports on this network.

Network Ports
Allows you to Enable/Disable the network ports on this network segment. You can update this field.

Network Port Security
Allows you to Lock/Unlock repeater ports. You can update this field.

Source Address Management

This section of the Repeater Configuration view indicates the timeout period in seconds.

Aging Interval
The time, in seconds, that dynamically learned forwarding information remains in the database before being selected. You can update this field.

Trap Configuration

This area of the Repeater Configuration View allows you to Enable or Disable any of the following types of traps:

Link Traps
When enabled, all packets indicating a change in link status are reported within the trap database.

Segmentation Traps
When enabled, all packets indicating a change in segmentation status are reported within the trap database.

Source Address Traps
When enabled, all packets indicating a change in source address are reported within the trap database.

Alarm Configuration

This area of the Repeater Configuration view provides configuration information on generating alarms for the selected module. The configuration information is as follows:

Timebase
This field allows you to set the alarm timebase. The timebase is the number of seconds used as the interval for performing all of the rate alarm checks. The minimum is 10 seconds. For example, if the timebase is 10 seconds, an alarm will occur only when the specified number of errors occurs within 10 seconds.

Traffic Alarms
This field displays whether traffic alarms are disabled or enabled. You can `Enable/Disable` traffic alarms.

Traffic Threshold
The threshold value within the alarm timebase which, once the number of packets is exceeded, generates a traffic alarm.

Collision Alarms
This field displays whether collision alarms are disabled or enabled. You can `Enable/Disable` collision alarms.

Collision Threshold
The threshold value within the alarm timebase which, once the number of collisions per good packet is exceeded, generates a collision alarm.

Broadcast Alarms
This field displays whether broadcast alarms are disabled or enabled. You can `Enable/Disable` broadcast alarms.

Broadcast Threshold
The threshold value within the alarm timebase which, once the number of broadcasts received is exceeded, generates a broadcast alarm.

Error Alarms
This field displays whether error alarms are disabled or enabled. You can `Enable/Disable` error alarms.

Error Threshold
The threshold value within the alarm timebase which, once the percentage of errors per good packet is exceeded, generates an error alarm.

Error Source

The Error Source area of the Repeater Configuration view provides a series of buttons allowing you to select the types of errors to include in the error sum. The selectable error types are as follows:

CRC
The amount of packets received by the module with bad CRC.

Runts
The amount of runt packets received by the module. A runt packet is one byte less than the standard Ethernet frame of 64 bytes (not including preamble).

OOW_Colls
The amount of collisions out of the standard window (51.2µs) due to a network problem.

Alignment
The amount of misaligned packets detected by the module.

No_Resource
The number of times the module ran out of resources (i.e., lack of buffer space) and could not accept packets.

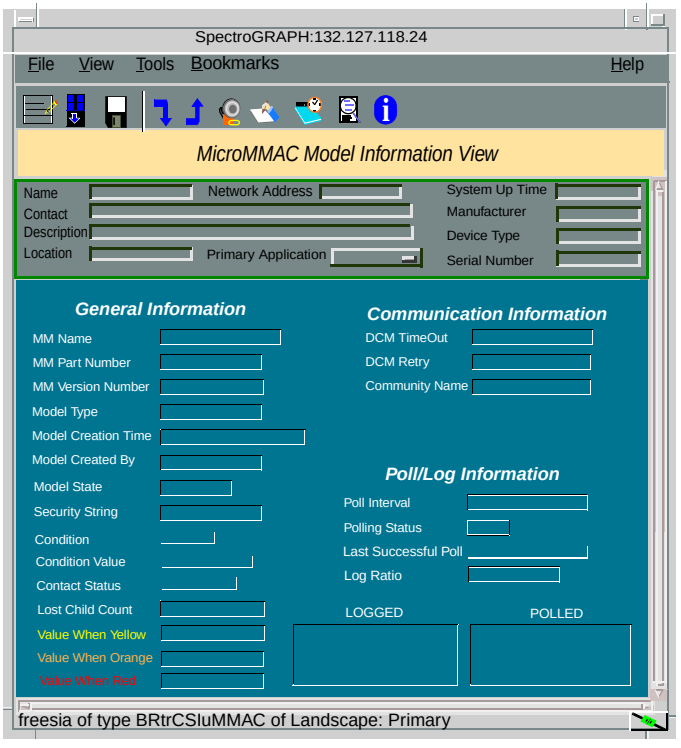
Giants
The amount of giant packets received by the module. A giant packet exceeds 1518 bytes (not including preamble).

Model Information View

This section provides a brief description of the Model Information views available for models of MicroMMAC-E Networks devices in SPECTRUM.

Model Information views provide descriptive and configuration information about SPECTRUM models of individual devices, interfaces, and applications. Figure 7 shows an example of the Model Information view accessed from the **Icon Subviews** menu for the MicroMMAC-E model's Device icon. Model Information views are also available for each of the Interface icons in the Interface Device and Interface Device Topology views, and for each of the Application icons in the Application view. Although these views may vary slightly depending on the particular entity being modeled, their basic layout and content are similar for most SPECTRUM management modules. Therefore these views are described in more detail in the ***SPECTRUM Views*** documentation.

Figure 7: Model Information View



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